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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/907,240	07/17/2001	Shyh-Kwei Chen	YOR9-2001-0458	6630
44628	7590	04/04/2007		
ANNE E. BARSCHALL 80 BENEDICT AVENUE TARRYTOWN, NY 10591-4142			EXAMINER STORK, KYLE R	
			ART UNIT	PAPER NUMBER
			2178	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/04/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	09/907,240	CHEN ET AL.	
	Examiner	Art Unit	
	Kyle R. Stork	2178	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-89 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11, 13-23, 25-35 and 37-89 is/are rejected.
- 7) ☒ Claim(s) 12, 24, 36 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This final office action is in response to the amendment to the claims filed 23 May 2006.
2. Claims 1-89 are pending. Claims 83-89 are newly added. Claims 1, 13, 25, 37, 42, 53, 64, and 75 are independent claims.

The objection to claims 12, 24, and 36 have been withdrawn in light of the amendment.

The rejection of claims 45-47, 56-58, and 67-69 under 35 USC 112 has been withdrawn.

The rejection of claims 1-3, 5-7, 9, and 37-40 under 35 USC 101 has been withdrawn.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 83 and 86 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
5. Claims 83 and 86 recites the limitation "the annotations" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-2, 4-5, 7-8, 13-14, 16-17, 19-20, 25-26, 28-29, 31-32, 37-39, 42, 44, 49, 53-55, 60, 64-66, 71, and 7-79 remain rejected and claims 83-89 are rejected under 35 U.S.C. 103(a) as being unpatentable over Xedi ("XML and EDI: Peaceful Co-Existence," 1999) in further view of Extol, Inc. ("XML: To Be Or Not To Be?" hereafter Extol).

As per independent claim 1, Xedi discloses a method for creating electronic communication, comprising executing the following operations in at least one data processing device:

- First retrieving data from at least one type of data source into a first electronic format using at least one first annotated schema (page 12, Figure 8; pages 11-14: Here, the user can access data in EDI)
- Second retrieving data from the first electronic format into a second electronic format (page 12, Figure 8; pages 11-14: Here, the user can access data in EDI or XML language. If the first electronic format is EDI, then here the second format is XML. Similarly, if the first electronic format is XML, then here the second format is EDI)

Xedi fails to specifically disclose X12 EDI standard as an annotated schema. However, the X12 EDI standard is an annotated schema in that it maps retrieved data into

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documents that conform to the standard (Extol: page 4, paragraph 1: Here data is retrieved through user input; page 6, paragraph 2: Here, both X12 and EDIFACT are disclosed as mapping data into the layout for various standard documents; Xedi: page 13, paragraph 2).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have combined Xedi with the X12 EDI schema, since it would have allowed a user to transform data from the EDI format to XML in order to facilitate transactions between vendors.

As per dependent claim 2, Xedi discloses the method wherein the first electronic format comprises at least one XML document (page 11).

As per dependent claim 4, Xedi discloses the method wherein the first and second retrieving are done using a same type software engine applied first to the least one type of data source and then to the first electronic format (Figures 8-9).

As per dependent claim 5, Xedi discloses the method wherein the second electronic format belongs to the category of XML/EDI electronic document specification languages (page 11).

As per dependent claim 7, Xedi discloses the method wherein the at least one second annotated schema comprises:

- A single DTD for all possible document types within a single industrial electronic document specification language (page 10, last paragraph)
- Annotations for retrieving specifications for a desired document type from the first electronic format (page 11, last paragraph; Figure 9; pages 11-13)

As per dependent claim 8, the applicant discloses the limitations similar to those in claim 4. Claim 8 is thusly rejected under Xedi.

As per independent claim 13, the applicant discloses limitations similar to those in claim 1. Xedi further shows transmission of data over the internet (page 11, paragraphs 3-4: Here Xedi discloses sending XML documents over the internet to trading partners).

As per dependent claim 14, the applicant discloses the limitations similar to those in claim 2. Claim 14 is thusly rejected under Xedi.

As per dependent claim 16, the applicant discloses the limitations similar to those in claim 4. Claim 16 is thusly rejected under Xedi.

As per dependent claim 17, the applicant discloses the limitations similar to those in claim 5. Claim 17 is thusly rejected under Xedi.

As per dependent claim 19, the applicant discloses the limitations similar to those in claim 7. Claim 19 is thusly rejected under Xedi.

As per dependent claim 20, the applicant discloses the limitations similar to those in claim 4. Claim 20 is thusly rejected under Xedi.

As per dependent claim 25, the applicant discloses the medium readable by a processing device and embodying code for performing the operations similar to those in claim 13. Claim 25 is thusly rejected under Xedi.

As per dependent claim 26, the applicant discloses the limitations similar to those in claim 2. Claim 26 is thusly rejected under Xedi.

As per dependent claim 28, the applicant discloses the limitations similar to those in claim 4. Claim 28 is thusly rejected under Xedi.

As per dependent claim 29, the applicant discloses the limitations similar to those in claim 5. Claim 29 is thusly rejected under Xedi.

As per dependent claim 31, the applicant discloses the limitations similar to those in claim 7. Claim 31 is thusly rejected under Xedi.

As per dependent claim 32, the applicant discloses the limitations similar to those in claim 4. Claim 32 is thusly rejected under Xedi.

As per independent claim 37, Xedi discloses at least one medium embodying code readable by at least one data processing device, the code comprising:

- A universal schema adapted to create all possible document types suitable for use with a single electronic document specification language (page 10, last paragraph)
- Annotations adapted to guide retrieval of data from at least one type of data source to specify a particular output document in accordance with the universal schema (Figure 9; pages 12-13, Converting EDI and XML: Here, the translator XEDI transforms EDI messages into an XML document.)

As per dependent claim 38, the applicant discloses the limitations similar to those in claim 2. Claim 38 is thusly rejected under Xedi.

As per dependent claim 39, the applicant discloses the limitations similar to those in claim 6. Claim 39 is thusly rejected under Xedi.

As per independent claim 42, Xedi discloses a method for depositing data into at least one type of data source, the method comprising executing the following operations in a digital data processing device:

- Receiving a specification for deposit (Figure 8; pages 11-14)
- Processing the specification in accordance with an annotated schema (pages 12-13, Converting EDI and XML)
- Responsive to the processing, depositing data in at least one type of data source in accordance with a local format of that source (pages 11-114: Here, the document is converted from either XML or EDI to either XML or EDI in order for the receiver to process the request.)

As per dependent claim 44, the applicant discloses the limitations similar to those in claim 2. Claim 44 is thusly rejected under Xedi.

As per dependent claim 49, the Xedi discloses the method wherein the processing comprises:

- First processing the specification in accordance with a universal annotated schema adapted to all document types supported by a given industrial electronic document specification language, in order to convert the specification into a first local format (page 10, last paragraph; page 12, Figure 8; pages 11-14)
- Second processing the first local format in accordance with a local annotated schema to convert the first local format to a second local format (page 12, Figure 8; pages 11-14)

As per independent claim 53, the applicant discloses the device similar to claim 13 and used to perform the method of claim 42. Claim 53 is thusly rejected under Xedi.

As per dependent claim 54, the applicant discloses the limitations similar to those in claim 6. Claim 54 is thusly rejected under Xedi.

As per dependent claim 55, the applicant discloses the limitations similar to those in claim 2. Claim 55 is thusly rejected under Xedi.

As per dependent claim 60, the applicant discloses the limitations similar to those in claim 49. Claim 60 is thusly rejected under Xedi.

As per independent claim 64, the applicant discloses the medium, readable by at least one data processing device embodying code for performing the method of claim 42. Claim 64 is thusly rejected under Xedi.

As per dependent claim 65, the applicant discloses the limitations similar to those in claim 6. Claim 65 is thusly rejected under Xedi.

As per dependent claim 66, the applicant discloses the limitations similar to those in claim 2. Claim 66 is thusly rejected under Xedi.

As per dependent claim 71, the applicant discloses the limitations similar to those in claim 49. Claim 71 is thusly rejected under Xedi.

As per independent claim 75, Xedi discloses a method comprising executing the following operation in at least one data processing device:

- Retrieving first data stored in at least one first format from a first data source

(page 12, Figure 8; pages 11-14)

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- Using at least one annotated schema including a universal annotated schema to convert the data into at least one second format (Figure 9)
- Depositing the first data according to at least one second format into a second data source (page 11; page 12, Figure 8)

Xedi fails to specifically disclose the method of:

- Retrieving second data according to at least one such second format from the second data source
- Using at least the universal annotated schema to convert the second data to at least one such first format

However, Extol discloses:

- Retrieving second data according to at least one such second format from the second data source (pages 18-19)
- Using at least the universal annotated schema to convert the second data to at least one such first format (pages 18-19)

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have combined Xedi's method with Extol's method, since it would have allowed for data to be passed between two vendors.

As per dependent claim 76, Xedi further discloses the method wherein each schema describes a structure of a target format and each annotation relates to a structure of a source format, so that each annotated schema guarantees that the retrieving steps create data that conforms to the target format without additional

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checking (page 13, paragraph 2: Here, the translator that facilitates conversion between X12 EDI and XML generates documents compliant with the standards).

As per dependent claims 77 –79, the applicant discloses the limitations similar to those in claim 76, and the same rejection is incorporated herein.

As per dependent claim 83, Xedi and Extol disclose the limitations similar to those in claim 1, and the same rejection is incorporated herein. Xedi further discloses wherein the annotations are inserted into the respective schema (pages 11-14).

As per dependent claims 84-89, the applicant discloses the limitations substantially similar to those in claim 83. Claims 84-89 are similarly rejected.

8. Claims 3, 9, 15, 21, 27, 33, 50, 61, and 72 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Xedi and Extol and further in view of Kotok (XML and EDI Lessons Learned and Baggage to Leave Behind, 1999).

As per dependent claim 3, Xedi discloses the limitations similar to those in claim 1, and the same rejection is incorporated herein. Xedi fails to specifically disclose the method wherein the first electronic format comprises at least one value pair. Kotok discloses the method wherein the first electronic format comprises at least one value pair (page 5, paragraph 4: Here, the DTD contains sets of elements and attributes in tag form, this is equivalent to value pairs. Further, the names that are used as tags and the element relationship or transaction form a pair of values, name and relationship/transaction).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have combined Xedi's method of retrieving data in an electronic format with Kotok's method of data containing value pairs, since it would have allowed a user to validate the structure of the document (Kotok: page 5, paragraph 4).

As per dependent claim 9, Xedi discloses the limitations similar to those in claim 1, and the same rejection is incorporated herein. Xedi fails to specifically disclose the method wherein the at least one type of data source comprises heterogeneous databases. Kotok discloses the method wherein the at least one type of data source comprises heterogeneous databases (page 3, paragraph 1: Here, the EDI X12 standard referenced in Xedi, is modeled on a relational database. This database is able to contain data formats consistent with the EDI X12 standard. This makes the database a heterogeneous database).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have combined Xedi's method of data retrieval with Kotok's method of using a database, since the X12 standard described in Xedi is reliant upon a database.

As per dependent claim 15, the applicant discloses the limitations similar to those in claim 3. Claim 15 is thusly rejected under Xedi and Kotok.

As per dependent claim 21, the applicant discloses the limitations similar to those in claim 9. Claim 21 is thusly rejected under Xedi and Kotok.

As per dependent claim 27, the applicant discloses the limitations similar to those in claim 3. Claim 27 is thusly rejected under Xedi and Kotok.

As per dependent claim 33, the applicant discloses the limitations similar to those in claim 9. Claim 33 is thusly rejected under Xedi and Kotok.

As per dependent claim 50, Xedi discloses the limitation similar to those in claim 49, and the same rejection is incorporated herein. Xedi further discloses:

- The universal annotated schema comprising a universal annotated DTD (page 11, last paragraph)
- The first local format comprises an XML document or at least one value pair (page 11)
- The local annotated schema comprises a local annotated DTD or local annotated table (page 11)

Xedi fails to specifically disclose the method wherein the second local format comprises multiple relational databases. Kotok discloses the method wherein the second local format comprises multiple relational databases (page 3, paragraph 1; page 5, paragraph 3: In the first section Kotok discloses a relational database. In the second section, Kotok discloses the ability of XML to reference data in repositories. A repository is well known in the art as a place where multiple databases or files are located (<http://en.wikipedia.org/wiki/Repository>)).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have combined Xedi's method of data retrieval with Kotok's method of using a database, since the X12 standard described in Xedi is reliant upon a database.

As per dependent claim 61, the applicant discloses the limitations similar to those in claim 50. Claim 61 is thusly rejected under Xedi and Kotok.

As per dependent claim 72, the applicant discloses the limitations similar to those in claim 50. Claim 72 is thusly rejected under Xedi and Kotok.

9. Claims 6, 18, 30, 40-41, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Xedi in further view of Extol, Inc. ("XML: To Be Or Not To Be?" hereafter Extol).

As per dependent claim 6, Xedi and Extol disclose the limitations similar to those in claim 1, and the same rejection is incorporated herein. Xedi further discloses the method wherein the first schema comprises at least one first DTD and the second schema comprises at least one second DTD (page 10, paragraphs 1-2). While Xedi fails to specifically disclose using these DTDs in conjunction with annotated schemas for retrieving data (page 12, Figures 8-9; pages 11-14). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have combined Xedi's use of DTDs in conjunction with Xedi's annotated schemas, since it would have allowed a user to save time because one annotated DTD could be used for all document transactions (page 10, paragraph 2).

As per dependent claim 18, the applicant discloses the limitations similar to those in claim 6. Claim 18 is thusly rejected under Xedi.

As per dependent claim 30, the applicant discloses the limitations similar to those in claim 6. Claim 30 is thusly rejected under Xedi.

As per dependent claim 40, Xedi discloses the medium of claim 39, wherein the universal DTD with recursive constructs (page 10; Figure 9: Here, Xedi discloses the use of an annotated DTD (labeled XEDI in Figure 9). The applicant further admits in the remarks filed 7 March 2005 that "recursive DTD structures are a normal part of DTD grammar (page 28, paragraph 2)). While Xedi fails to specifically disclose using these DTDs in conjunction with annotated schemas for retrieving data (page 12, Figures 8-9; pages 11-14). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have combined Xedi's use of DTDs in conjunction with Xedi's annotated schemas, since it would have allowed a user to use one annotated DTD for all document transactions (page 10, paragraph 2).

As per dependent claim 41, Xedi discloses the medium wherein the universal DTD (page 10, paragraphs 1-2) attaches unique labels to corresponding intermediate XML document or value pairs (Figure 9; pages 12-13, Converting EDI and XML). While Xedi fails to specifically disclose using these DTDs in conjunction with annotated schemas for retrieving data (page 12, Figures 8-9; pages 11-14). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have combined Xedi's use of DTDs in conjunction with Xedi's annotated schemas, since it would have allowed a user to use one annotated DTD for all document transactions (page 10, paragraph 2).

As per dependent claim 43, the applicant discloses the limitations similar to those in claim 6. Claim 43 is thusly rejected under Xedi.

10. Claims 10-11, 22-23, and 34-35 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Xedi and Extol in further in view of Rein (XML '99: Quotes from the Conference Floor, 1999).

As per dependent claim 10, Xedi discloses the limitations similar to those in claim 1, and the same rejection is incorporated herein. Xedi further discloses creating internal representation relating the second format to the at least one type of data source (page 11- 14). Xedi fails to specifically disclose the method further comprising using a GUI tool. Rein discloses the method further comprising using a GUI tool (page 3, paragraph 2).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have combined Xedi's method of relating the format to a data source with Rein's method of using a GUI tool, since it would have allowed a user to visually select the format.

As per dependent claim 11, Xedi and Rein disclose the limitations similar to those in claim 10, and the same rejection is incorporated herein. Rein further discloses the method wherein the GUI tool can systematically organize a template from combining and merging (page 3, paragraph 2: Here, several templates are combined, including ASP, JavaScript, and CGI).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have combined Xedi and Rein's method of using a GUI with Rein's method of creating templates through a GUI, since it would have allowed a user to create hybrid applications using code libraries (Rein: page 3, paragraph 2).

As per dependent claim 22, the applicant discloses the limitations similar to those in claim 10. Claim 22 is thusly rejected under Xedi and Rein.

As per dependent claim 23, the applicant discloses the limitations similar to those in claim 11. Claim 23 is thusly rejected under Xedi and Rein.

As per dependent claim 34, the applicant discloses the limitations similar to those in claim 10. Claim 34 is thusly rejected under Xedi and Rein.

As per dependent claim 35, the applicant discloses the limitations similar to those in claim 11. Claim 35 is thusly rejected under Xedi and Rein.

11. Claims 45-47, 56-58, and 67-69 remain rejected and claims 80-82 are rejected under 35 U.S.C. 103(a) as being unpatentable over Xedi and Extol and further in view of Abjanic et al. (US 2003/0069975, 2003).

As per dependent claim 45, Xedi discloses the limitations similar to those in claim 42, and the same rejection is incorporated herein. Xedi fails to specifically disclose the method wherein the operations further comprise determining whether the annotated schema is reversible in view of the specification for deposit. Extol disclose reversibility (pages 18-19: Here, Extol discloses a transformation of EDI-to-XML and the reverse transformation of XML-to-EDI). Abjanic discloses the method of determining whether reversibility (paragraphs 85-86 and 98: Here, it is determined whether the current format of the data is compliant with the destination application. If the data is not compliant with a data type understood by the destination application, than a transformation is applied to the data to make it compliant).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have combined Xedi's method with Extol's method since it would have allowed large and small vendors to supply each other with data based upon a standard (Xedi: page 12, final paragraph). Further, it would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have combined Xedi and Extol's method with Abjanic's method, since it would have allowed a user to save computational time by only reversing data if necessary.

As per dependent claim 46, Xedi, Extol, and Abjanic disclose the limitations similar to those in claim 45, and the same rejection is incorporated herein. Extol further discloses, creating a revised annotated schema that is reversible, so that the data is depositable in accordance with the revised annotated schema (pages 18-19).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have combined Xedi, Extol, and Abjanic's method with Extol's method, since it would have allowed a user to store data in a format that would be able to be processed locally.

As per dependent claim 47, Xedi, Extol, and Abjanic disclose the limitations similar to those in claim 46, and the same rejection is incorporated herein. Xedi further discloses depositing the data in accordance with annotations of the annotated schema (pages 11-114). Xedi further discloses the use of an annotated schema in conjunction with a DTD to convert between EDI and XML (Figure 9; page 10, paragraph 2). Extol specifically discloses conversion of EDI-to-XML and XML-to-EDI, and the use of DTD by XML to describe document structure (pages 9 and 18-19).

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It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have combined Xedi, Extol, and Abjanic's method with Extol's method, since it would have allowed a user to store data in a format that would be able to be processed locally.

As per dependent claim 56, the applicant discloses the limitations similar to those in claim 45. Claim 56 is thusly rejected under Xedi and Abjanic.

As per dependent claim 57, the applicant discloses the limitations similar to those in claim 46. Claim 57 is thusly rejected under Xedi and Abjanic.

As per dependent claim 58, the applicant discloses the limitations similar to those in claim 47. Claim 58 is thusly rejected under Xedi and Abjanic.

As per dependent claim 67, the applicant discloses the limitations similar to those in claim 45. Claim 67 is thusly rejected under Xedi and Abjanic.

As per dependent claim 68, the applicant discloses the limitations similar to those in claim 46. Claim 68 is thusly rejected under Xedi and Abjanic.

As per dependent claim 69, the applicant discloses the limitations similar to those in claim 47. Claim 69 is thusly rejected under Xedi and Abjanic.

As per dependent claim 80, Xedi discloses the method wherein the annotated schema is determined to be usable for both retrieval and deposit (page 13; Figure 9: Here, documents in either X12 EDI or XML can be converted to the other document format).

As per dependent claims 81-82, the applicant discloses the limitations similar to those in claim 80. Claims 81-82 are similarly rejected.

12. Claims 48, 59, and 70 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Xedi and Extol and further in view of Building Oracle and XML Applications (2000, hereafter Oracle).

As per dependent claim 48, Xedi discloses the limitations similar to those in claim 42, and the same rejection is disclosed herein. Xedi fails to specifically disclose the method wherein the operation further comprise propagating the deposit to a join union of the specification. Oracle discloses the method wherein the operation further comprise propagating the deposit to a join union of the specification (pages 2-4: Here, an Oracle join query is used to obtain data. This data is then used to generate an XML document).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have combined Xedi's method with Oracle's method, since it would have allowed a user to create an XML document from a query.

As per dependent claim 59, the applicant discloses the limitations similar to those in claim 48. Claim 59 is thusly rejected under Xedi and Malerba.

As per dependent claim 70, the applicant discloses the limitations similar to those in claim 48. Claim 70 is thusly rejected under Xedi and Malerba.

13. Claims 51, 62, and 73 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Xedi in further view of Extol, Abjanic, and Oracle.

As per dependent claim 51, Xedi discloses the limitations similar to those in claim 42, and the same rejection is incorporated herein. Xedi further discloses:

- The processing includes:
 - First processing the specification in accordance with a universal annotated schema adapted to all document types supported by a given industrial electronic document specification language, in order to convert the specification into a first local format ((page 10, last paragraph; pages 12-13, Converting EDI and XML)
 - Second processing the first local format in accordance with the revised annotated schema to convert the first local format to a second local format (page 12, Figure 8; pages 11-14)

Xedi fails to specifically disclose:

- The operations further comprise:
 - Determining whether the annotated schema is reversible in view of the specification for deposit
 - Responsive to a determination that the annotated schema is not so reversible, creating a revised annotated schema according to which the specification for deposit is reversible
- Depositing includes propagating the deposit to a join union of the specification

However, Extol and Abjanic discloses:

- The operations further comprise:

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- Determining whether the annotated schema is reversible in view of the specification for deposit (Abjanic: paragraphs 85-86; paragraph 98)
- Responsive to a determination that the annotated schema is not so reversible, creating a revised annotated schema according to which the specification for deposit is reversible (Extol: pages 18-19)

Further, Oracle discloses:

- Depositing includes propagating the deposit to a join union of the specification (pages 2-4)

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have combined Xedi, Extol, and Abjanic's method with Oracle's method since it would have allowed a user to easily generate an EDI X12 compliant document from a query.

As per dependent claim 62, the applicant discloses the limitations similar to those in claim 51. Claim 62 is thusly rejected under Xedi, Abjanic, and Oracle.

As per dependent claim 73, the applicant discloses the limitations similar to those in claim 51. Claim 73 is thusly rejected under Xedi, Abjanic, and Oracle.

14. Claims 52, 63, and 74 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Xedi, Extol, Abjanic, and Oracle in further view of Kotok.

As per dependent claim 52, Xedi, Extol, Abjanic, and Oracle disclose the limitation similar to those in claim 51, and the same rejection is incorporated herein. Xedi further discloses:

- The universal annotated schema comprising a universal annotated DTD (page 11, last paragraph)
- The first local format comprises an XML document or at least one value pair (page 11)
- The local annotated schema comprises a local annotated DTD or local annotated table (page 11)

Xedi, Extol, Abjanic, and Oracle fail to specifically disclose the method wherein the second local format comprises multiple relational databases. Kotok discloses the method wherein the second local format comprises multiple relational databases (page 3, paragraph 1)

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have combined , Xedi, Extol, Abjanic, and Oracle's method with Kotok's method of using a database, since the X12 standard is reliant upon a database.

As per dependent claim 63, the applicant discloses the limitations similar to those in claim 52. Claim 63 is thusly rejected under Xedi, Abjanic, Oracle, and Kotok.

As per dependent claim 74, the applicant discloses the limitations similar to those in claim 52. Claim 74 is thusly rejected under Xedi, Abjanic, Oracle, and Kotok.

Allowable Subject Matter

15. Claims 12, 24, and 36 remain objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

16. Applicant's arguments filed 23 May 2006 have been fully considered but they are not persuasive.

The applicant's first argument with respect to the prior art of record is based upon the belief that Extol does not disclose a schema (pages 24-25). However, the examiner respectfully disagrees. The applicant defines a schema as describing the structures and types for data or documents (specification: page 6). As the examiner asserted, X12 and EDIFACT appear to satisfy this definition of a schema (Extol: page 6, paragraph 2; Xedi: page 13, paragraph 1). Further, the examiner directs the applicant's attention to the cited reference "ANSI X12" which discloses information about the ANSI X12 standard. Each transaction set of the standard contains data segments and data elements (ANSI: page 4, paragraph 1). "By definition, a data segment must begin with a segment identifier followed by one or more data elements and ending with a segment termination (ANSI: page 4, paragraph 1)." This appears to meet the applicant's definition of schema, as the standard describes the structures (beginning with a segment identifier, data, and ending with segment termination) and types of data for documents (price, size, or product code (ANSI: page 4, paragraph 1)). With respect to "annotation" as defined by the applicant, an annotation furnishes mapping functions that connect data from heterogeneous data sources to target data sources. Xedi discloses use of a translator using the X12 dictionary to convert from the ANSI X12 EDI format to XML (page 13, paragraph 1). Further, as Xedi discloses both ANSI X12 EDI and the

annotation that furnishes mappings between EDI and XML, Xedi appears to disclose an annotated schema.

The applicant further argues that Xedi does not disclose a dictionary (page 25). Again, the examiner respectfully disagrees. Xedi's use of the X12 data dictionary to transform messages to/from X12 EDI to/from XML appears to teach a universal schema (Figure 9). All X12 EDI data and XML data is passed through this universal dictionary in order to transform the data.

The applicant further argues that the Extol and Xedi articles are high level articles and "do not provide sufficiently detailed or enabling disclosures to allow one of ordinary skill in the art to create such a hybrid system (page 26)." Again, the examiner disagrees. The applicant appears to be stating that it would not be possible to incorporate Xedi into Extol. However, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

The applicant further argues that the prior art of record fails to teach a first format which is distinct from a second format (pages 26-27). The examiner respectfully disagrees. XML and EDI are two distinct formats (Xedi: page 12, figure 8; pages 11-14).

The applicant further argues that the prior art fails to teach reversibility of annotated schema (page 27). The examiner respectfully disagrees. The applicant's remarks filed 23 May 2006 state, "This means that data can be taken from the "local format" into however the specification specifies data (page 22)." Therefore, data converted from the local format of EDI into XML via an annotated schema as disclosed by Xedi (page 12, figure 8; pages 11-14) appears to meet this limitation.

Finally, the applicant argues that a new reference has been added to the rejection of claims 50, 61, and 72 (page 28). The examiner respectfully disagrees. Instead, the examiner is relying upon the definition of a repository being notoriously well known in the art as a place where multiple databases or files are located, thereby meaning Kotok discloses the applicant's claim limitations. The definition of "repository" has been added as proof of the definition of repository.

Conclusion

17. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kyle R. Stork whose telephone number is (571) 272-4130. The examiner can normally be reached on Monday-Friday (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Hong can be reached on (571) 272-4124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kyle R Stork
Patent Examiner
Art Unit 2178

krs


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PRIMARY EXAMINER